“FIGHT AGAINST DISABILITY”

PRESENTERS -

DR. JANNATUL FERDOUS

DR. OISHEE MONI MEDHA

DR. ABIDATUS SUBHANA

On behalf of Department of Orthopedics

Particular's of the patient

- Name : Mrs. Sagori
- Age : 30 years
- Sex : Female
- Occupation : Housewife
- Address : Shreepur, W-7 Moydhanigi, Bhangura ,Pabna
- Date of admission : 14.01.24
- Date of examination : 14.01.24

Chief Complaints :

1. Mid back pain for 5 months
2. Low grade fever for last 4 months
3. Weakness and loss of sensation of both lower limb for 1 month
4. Difficulty in micturation for same duration

History of present illness

According to the statement of the patient she was reasonably well 5 months back. Then she developed mid-back pain which started spontaneously. Initially it was dull aching, non radiating, intermittent in nature. Pain was exaggerated by movement and walking and relieved by taking analgesics & rest. She also complained of low grade evening rise of temperature for last 4 months.

History of present illness (Cont)

Highest recorded temperature was 100°F. She also complained of weakness and numbness of both lower limbs for last 2 months. It gradually progressed over last 1 month leading to paralysis and loss of sensation. She also complained about weight loss (almost 8 kg) over 5 months.

History of present illness (Cont)

For this she took consultation from a local doctor and was diagnosed as a case of Pulmonary Tuberculosis and started anti-TB regimen(4FDC) 1 month ago. She didn’t complain about any pain or swelling in other joints of the body. Also didn’t give any history of trauma. But she complained of difficulty in micturation along with constipation for last 1 month.

History of Past illness :

Nothing contributory

Drug history :

Tab Ethambutol + isoniazide + Pyrizinamide + Rifampicin (4 FDC) for 1 month

Allergic history :

Not allergic to any known food

Obstetric History :

Para : 1

Gravida : 0

Marriage for : 7 years

Age of last child : 1 year 11 months

Menstrual history :

Age of menarche : 13 years

Period : 6 days

Flow : Average

Cycle : 28 days

LMP : 30 days back

Immunization :

Vaccinated under EPI schedule

Family history :

Her father and two brothers had Pulmonary TB. They also completed anti TB regimen. Husband & the only son are in good health .

Personal history :

Non smoker, non betel nut chewer

General examination:

Appearance	Ill looking
Body Build	Average
Cooperation	Cooperative
Decubitus	On choice
Nutrition	Average
Anemia	Absent
Jaundice	Absent
Cyanosis	Absent
Clubbing	Absent

General examination:

Koilonychia	Absent
Dehydration	Absent
Edema	Absent
Pulse	95 bpm
BP	110/80 mm Hg
Temp	100 °F
Respiratory rate	20 breaths/min
Lymph node	Not palpable
Thyroid gland	Not palpable

Systemic Examination

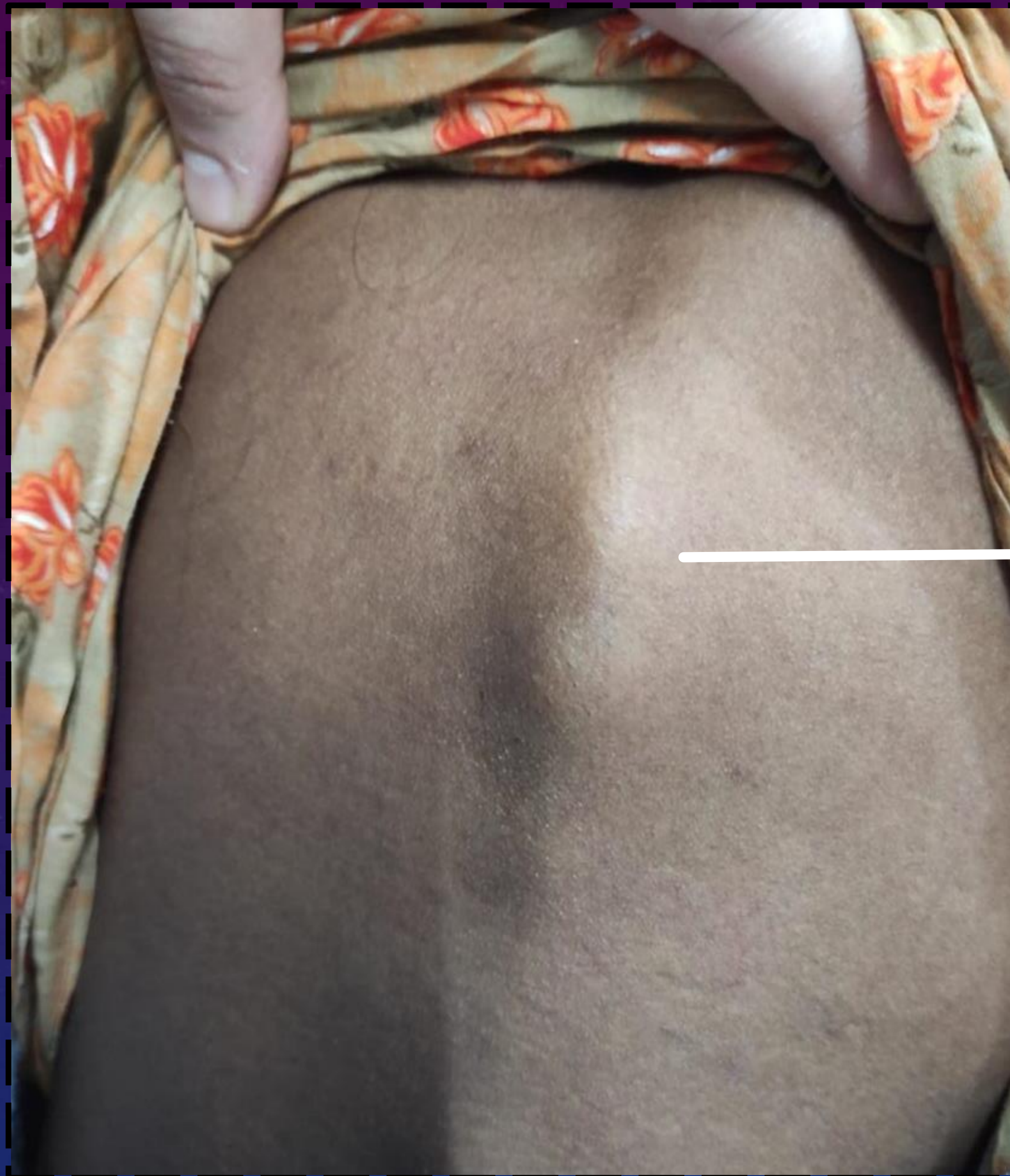
Musculoskeletal System

Spine examination:

a) Look : There was a visible gibbus over the thoracic vertebrae. Kyphosis was present .There was no scar & hypopigmentation over the back. Hair distribution was normal.

b) Feel : Tenderness was present over the thoracic D8-D10 vertebrae. Local temperature was normal.

c) Move : No active movement of both lower limbs



Gibbus

Right lower limb	Left lower limb
Look - Muscle wasting over thigh and leg. No scar mark, no deformity or no swelling was present Feel - No tenderness was present in any joint. Local temperature was normal in all joint.	Look - Muscle wasting over thigh and leg. No scar marks. No deformity, no swelling was present Feel – No tenderness is present in any joint. Local temperature was normal in all joint .

Move :

There was no active movement on both lower limbs

Move: (cont)

Passive movement	Left Leg	Right Leg	Normal
Hip Joint			
Flexion	0˚ - 130˚	0˚ - 130˚	0˚ - 130 ˚
Extension	0˚ - 20˚	0˚ - 20˚	0˚ - 20˚
Abduction	0˚ - 45˚	0˚ - 45˚	0˚ - 45˚
Adduction	0˚ - 38˚	0˚ - 30˚	0˚ - 30˚
External Rotation	0˚ - 45˚	0˚ - 45˚	0˚ - 45˚
Internal Rotation	0˚ - 45˚	0˚ - 45˚	0˚ - 45˚
Knee Joint			
Range of motion	0°- 135°	0˚-135˚	0˚-135˚

Move: (CONT.)

Passive movement	Left Leg	Right Leg	Normal
Ankle Joint Dorsiflexion Planter Flexion	10˚ - 20˚ 40˚ - 55˚	10˚- 20˚ 40˚- 55˚	10˚ - 20˚ 40˚ - 55˚
Great Toe Flexion Extension	40˚ - 45˚ 45˚ - 65˚	40˚ - 45˚ 45˚- 65˚	40˚- 45˚ 45˚ - 65˚

Neurovascular Status

Neurological Examination:

Motor >

Lower Limb –

Bulk of muscle:

Site	Left	Right
Thigh	Mild wasting present	Mild wasting present
Leg	Mild wasting present	Mild wasting present

Tone of Muscle :

Left	Right
Increased	Increased

Power of Muscle :

Site	Left Leg	Right Leg	Normal
Hip Joint Flexion Extension Abduction Adduction	 0/5 0/5 0/5 0/5	 0/5 0/5 0/5 0/5	5/5
Knee Joint Flexion Extension	 0/5 0/5	 0/5 0/5	5/5

Cont.

Site	Left	Right	Normal
Ankle Joint Dorsiflexion Planter Flexion	 0/5 0/5	 0/5 0/5	5/5
Great Toe Flexion Extension	 0/5 0/5	 0/5 0/5	5/5

Sensory :

Dermatomes	Right lower limb	Left Lower limb
T11	Normal	Normal
T12	Diminished	Diminished
L1	Diminished	Diminished
L2	Diminished	Diminished
L3	Diminished	Diminished
L4	Diminished	Diminished
L5	Diminished	Diminished
S1	Diminished	Diminished

Reflex:

	Left Leg	Right Leg
Knee	Exaggerated	Exaggerated
Ankle	Exaggerated	Exaggerated
Planter	Extensor	Extensor

Clonus :

Patellae and Ankle clonus were present on both side.

Vascular Examination :

All the peripheral pulses were palpable.

Other systemic examination revealed no abnormal findings.

Salient features :

According to the statement of the patient , she was reasonably well 5 months back. Then she developed mid back pain, which started spontaneously. Pain was dull aching ,non radiating, intermittent .It was exaggerated by movement and walking and relieved by taking analgesics & rest. She complained of low grade evening rise of temperature for last 4 months. Highest recorded temperature was 100°F. She also complained of weakness and numbness of both lower limbs for last 2 months.

Salient features (Cont)

It gradually progressed over last 1 month leading to paralysis and loss of sensation . She also complained about weight loss (almost 8 kg) over 5 months. For this she took consultation with local doctor and was diagnosed as a case of Pulmonary Tuberculosis and started anti-TB regimen(4FDC) for 1 month . She didn’t complain about any pain or swelling in other joints of the body. Also didn’t give any history of trauma.

Salient features (cont)

But she complained of difficulty in micturition along with constipation for 1 month. On general examination all her vitals were normal and there were no abnormalities detected. On examination of the musculoskeletal system, upon looking, there was visible gibbus over thoracic vertebrae and kyphosis was present. On palpation, tenderness was present over thoracic vertebrae. There was no active movement on both lower limbs.

Salient features (cont)

On examination of neurological system , mild wasting was present on both thigh and legs. Muscle tone of both legs was increased. Muscle power was 0/5 . On sensory examination T11 sensory were intact. There was decreased sensation in T12,L1,L2,L3,L4,L5 and S1. Knee jerk and ankle jerk of both legs were exaggerated. Planter response was extensor in both legs. Patellae and ankle clonus were present on both side. Other systemic examination revealed no abnormal findings.

Provisonal diagnosis:

Provisonal diagnosis:

Dorsal cord compression with spastic paraplegia (Stage 4)

Stages of Paraplegia : (SM Tuli)

- Stage 1 - Patient unaware of neural deficit

  eg : Ankle & Patellar Clonus

- Stage 2 – Patient aware of neural deficit but can walk with support
- Stage 3 – Non ambulatory (Cannot walk with support)

  eg : Paralysis in Extension

- Stage 4 – Non ambulatory , paralysis in Flexion with bowel and bladder involvement

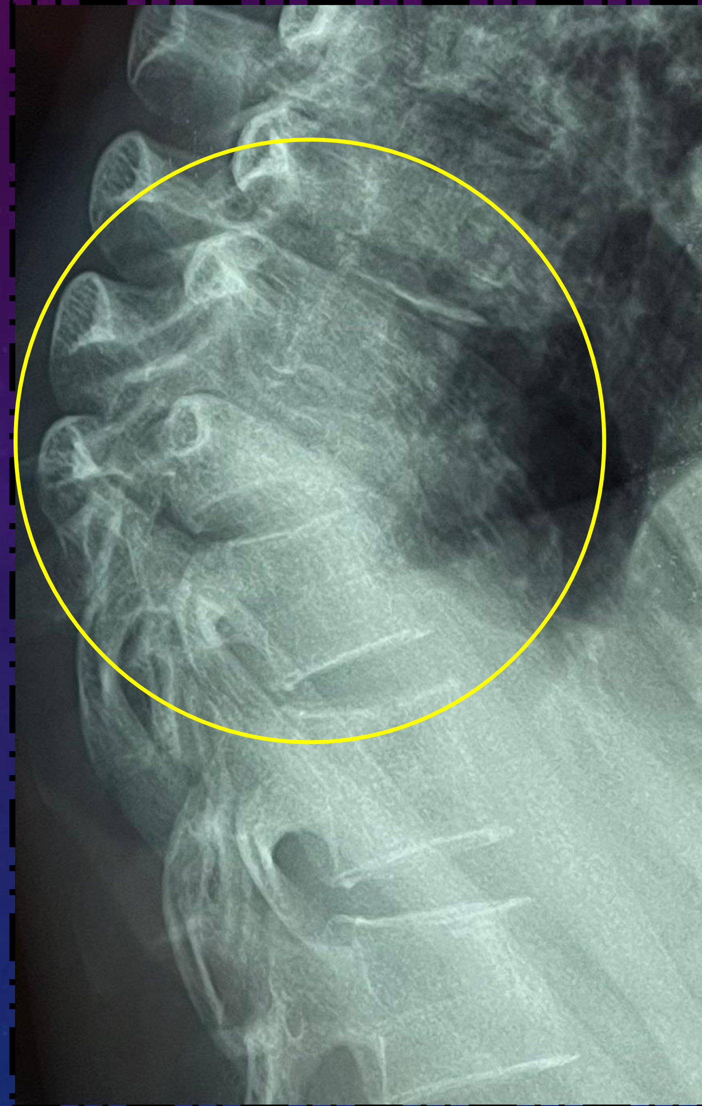
Differential diagnosis:

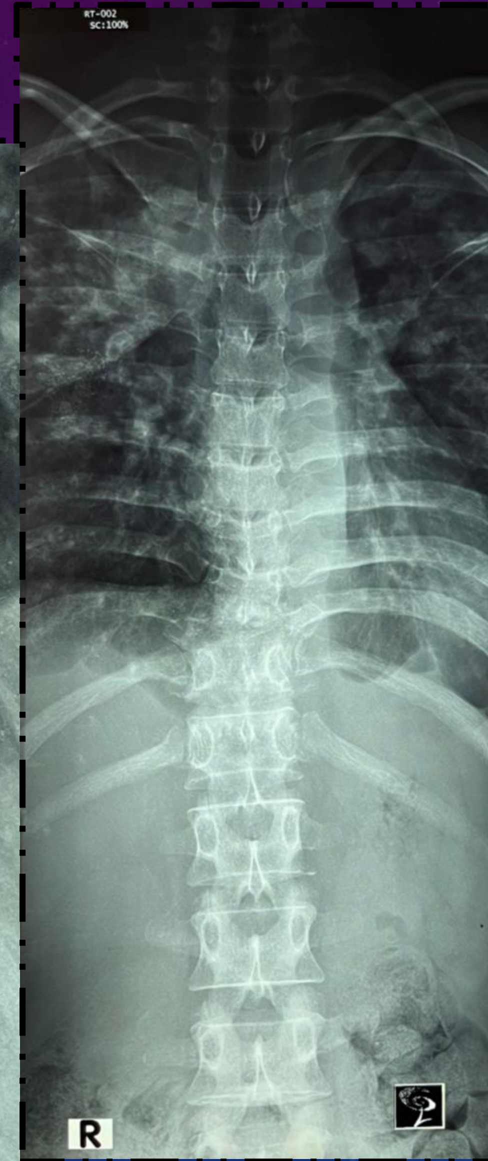
- TB spine
- Pyogenic osteomyelitis
- Neoplasm of dorsal vertebrae

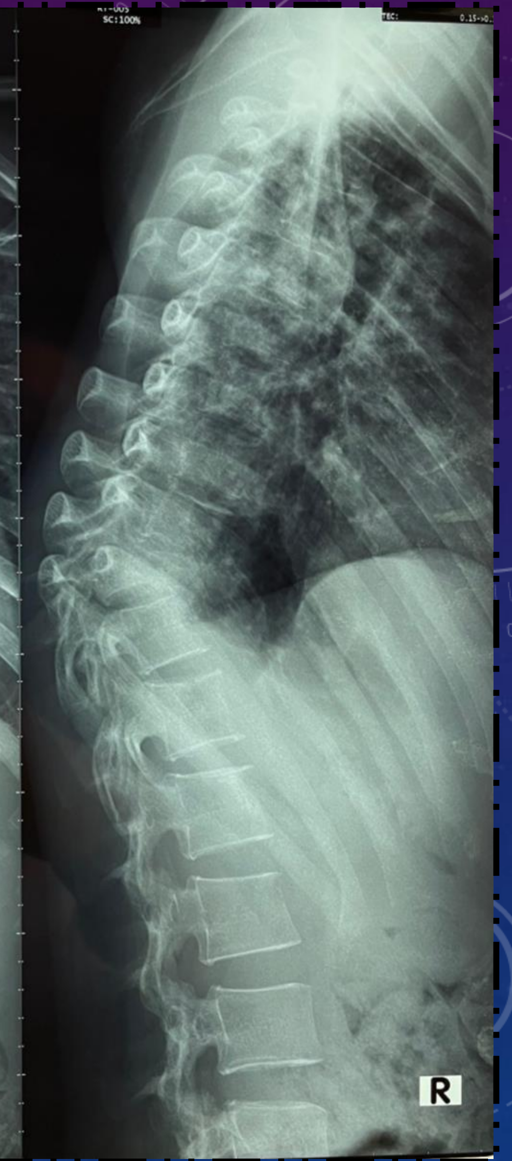
Investigations :

X-Ray Dorsal Spine Anterior-Posterior and lateral View :

Collapse of the vertebral body with kyphotic deformity

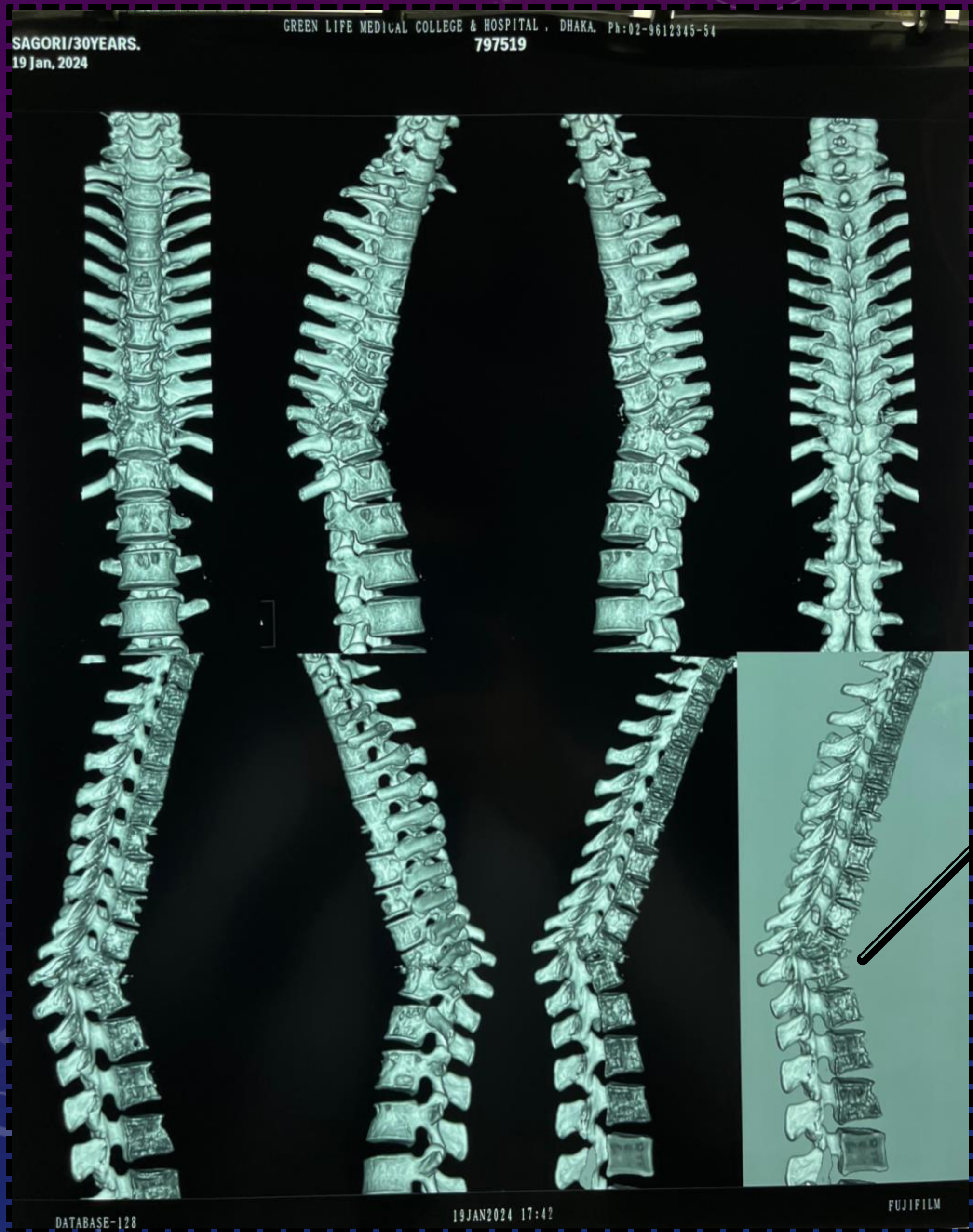






CT Scan :

- Partial collapse and retropulsion of the fragments of D10 vertebrae body resulting compression over spinal cord .
- Pre para vertebral soft tissue swelling with abscess


SAGORI/30YEARS.
19 Jan, 2024
GREEN LIFE MEDICAL COLLEGE & HOSPITAL , DHAKA. Ph:02-9612345-54
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POPULAR DIAGNOSTIC CENTER RAJSHAHI
MRI 3T.
Holding No. 617,Laxmipur,Rajshahi, Bangladesh. Hotline : 09666787811

MRI of dorsal spine :

TB Spine (Pott’s disease) in the D8-D10 vertebral bodies with collapse of the D10 causing kyphosis associated with prevertebral abscess at the level of D5-D12 vertebrae.

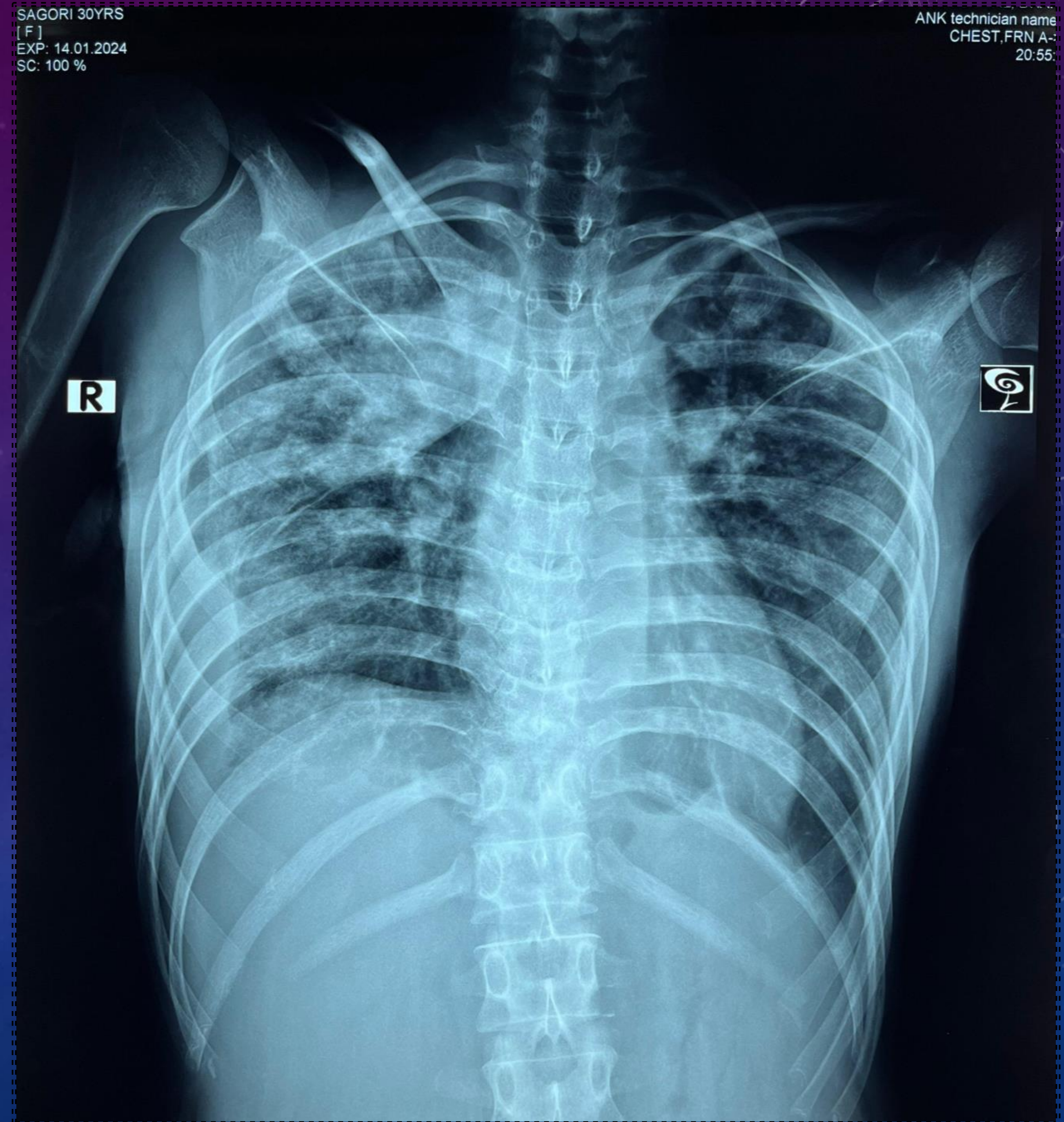
POPULAR DIAGNOSTIC CENTER RAJSHAHI

MRI 3T.

Holding No. 617,Laxmipur,Rajshahi, Bangladesh. Hotline : 09666787811

Xray of chest

- Multiple patchy opacities involving both lungs but more prominent in right side.
- There is also a homogenous opacity involving right upper and midzone



Others :

Z-N Stain of sputum : AFB not seen

Sputum Culture of secondary infection : Yielded no growth

Liver function test :

S.Bilirubin : 0.5 mg/dl

ALT : 35 U/L

AST : 27 U/L

Clinical diagnosis

Pott’s disease (D8-D10) with spastic paralysis of both lower limb

Plan of treatment:

Decompression along with stabilization and fixation by pedicle screw and rods

General anesthesia fitness investigation :

CBC:

Trait	Result
HB%	11.4 g/dl
ESR	47 mm in 1st hour
WBC	5.87 x 10 ^9/L
RBC	5.0x10^9/L
Platelet	310x10^9/L
Neutrophil	65%
Eosinophil	04%

- **ECG** : Normal
- **ECHO** : Normal
- **S. Electrolytes** :

  Na - 140 mmol/L

  K - 3.8 mmol/L

  Cl - 104 mmol/L
- **S.Creatinine** - 0.8 mg/dl

- **HBsAg** - Negative
- **Anti HCV** - Negative

Urine R/M/E :

- Color : Straw
- Specific gravity : > = 1.030
- Sugar : Nil
- Protien : Trace
- Pus Cell : 4-8/HPF
- RBC : 0-2/HPF
- Cast : Nil
- Crystal : Nil
- Others : Nil

Pre operative order :

- NPO from 5 AM till further order (28.01.24)
- Please take written informed consent from patient and attendant
- Please clean shave the operative area (back)
- Please give Tab Lexotenil 3mg 1 hour before sleep
- Please give morning dose of Anti-TB drug 3 tab stat and tab Pyridoxin 20mg 1 tab stat at 5 AM
- Please sent the patient to OT at 10.20AM (28.1.24)

Operation Note :

Indication : TB spine with spastic paraplegia

Name of Operation : Posterior decompression along with stabilization and fixation by Pedicular screw and rods with interconnecting bar (from D8-D9 and D11-D12)

Anesthesia : General

Incision : Posterior midline

Procedure

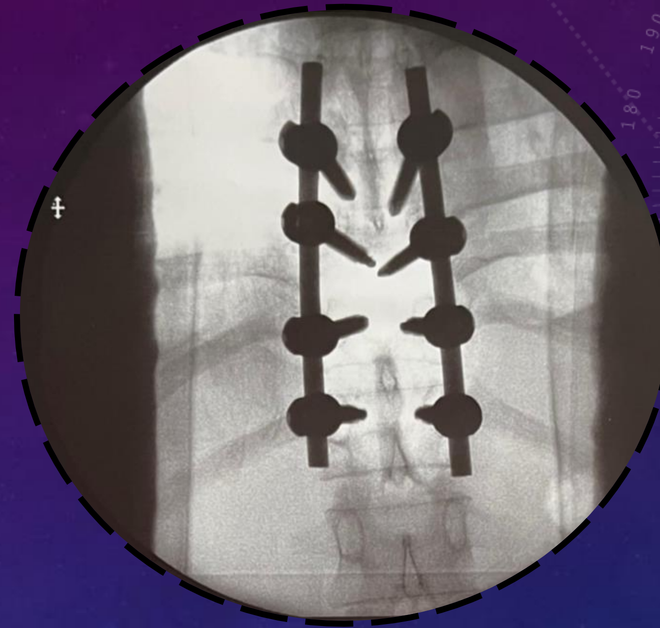
- With all aseptic precaution, proper painting and draping was done.

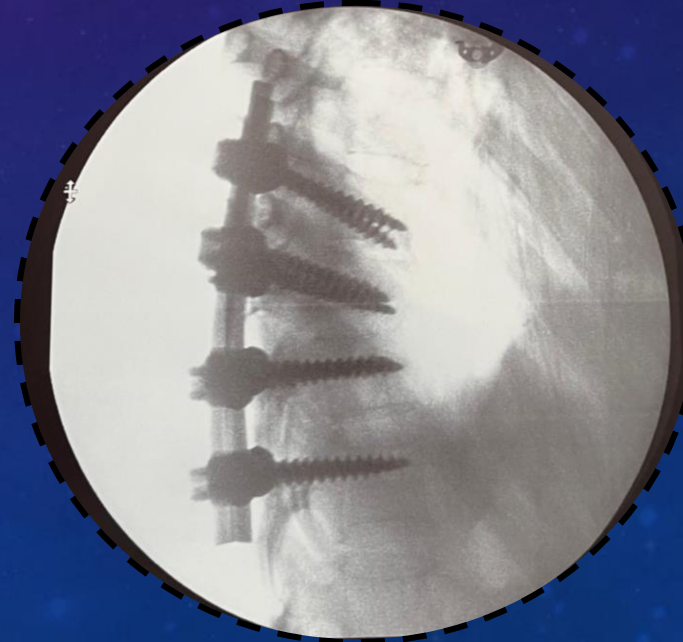
A posterior midline incision was made. With meticulous dissection paravertebral muscle was seperated from vertebral process and muscles were retracted laterally. The dorsal vertabrae from D8 to D12 were exposed. Vertebral level was confirmed by C-arm.

Procedure (Cont)

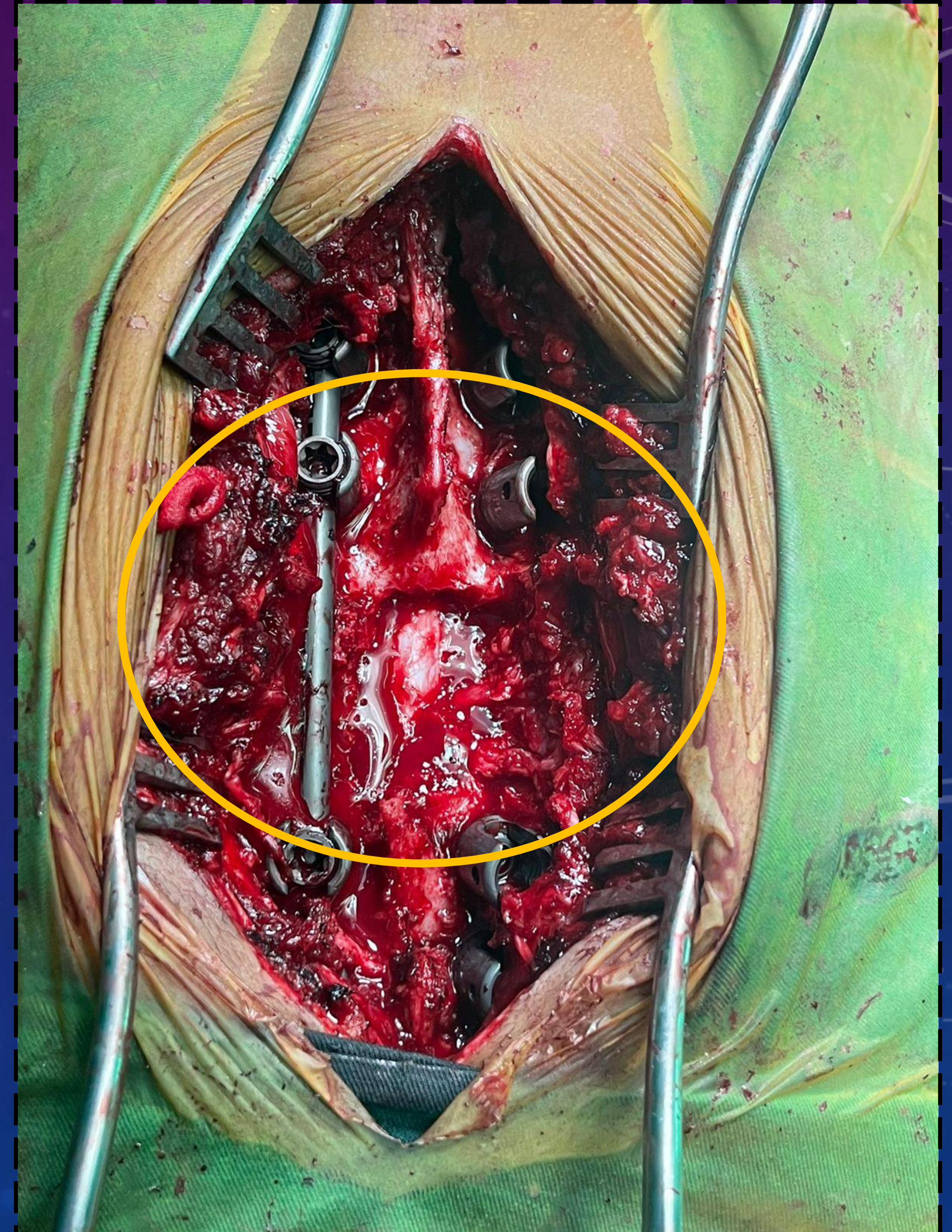
- Eight Pedicular screws placed on D8-D9 to D11-D12 under C-arm guidance. Then laminectomy was done. Pus came out which was evacuated and sent for C/S .Spinal cord was found compressed by collapsed D10 vertebrae.
- Posterior decompression was done and all the infected tissue was evacuated and send for histopathology. Spinal cord was found free from compression.

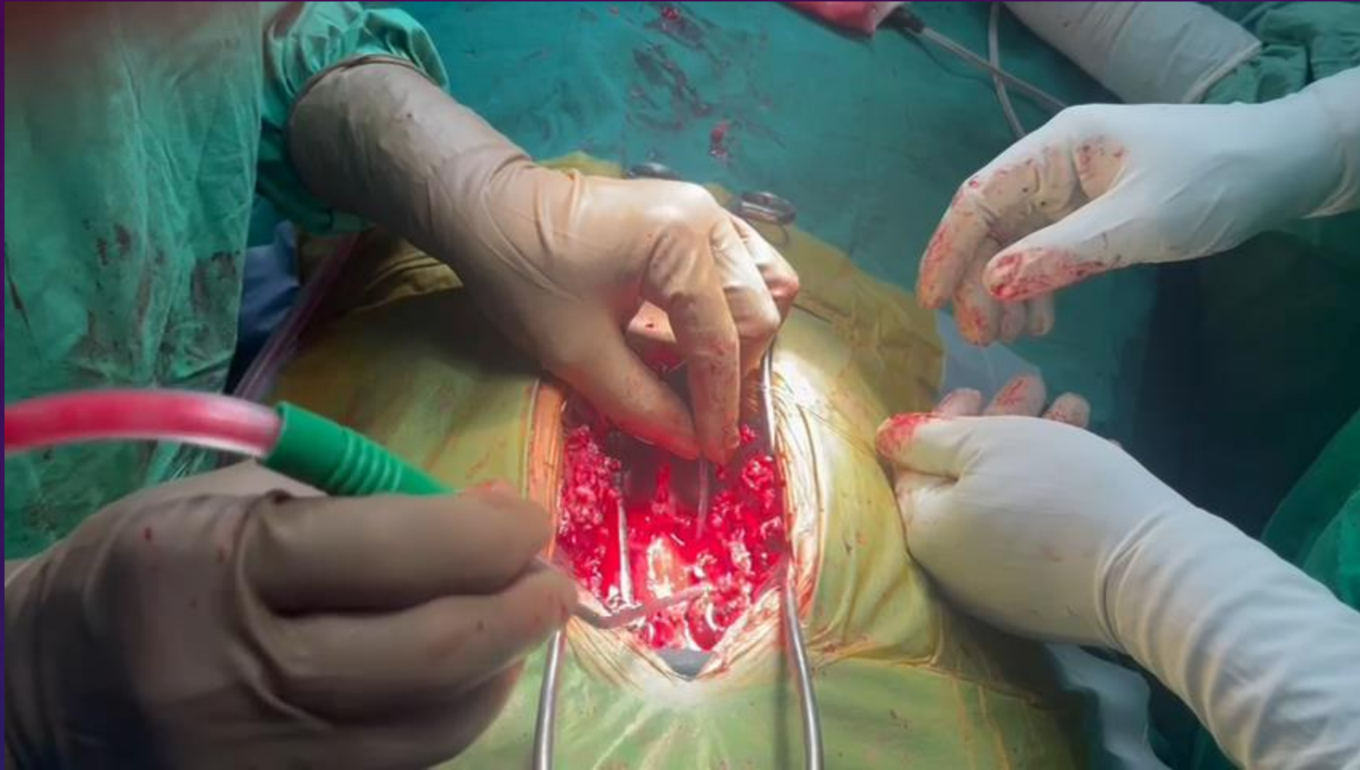
- Then stabilization was done by rods and interconnecting bar. Position of the all 8 pedicular screws, rods and interconnecting bar checked by C-arm

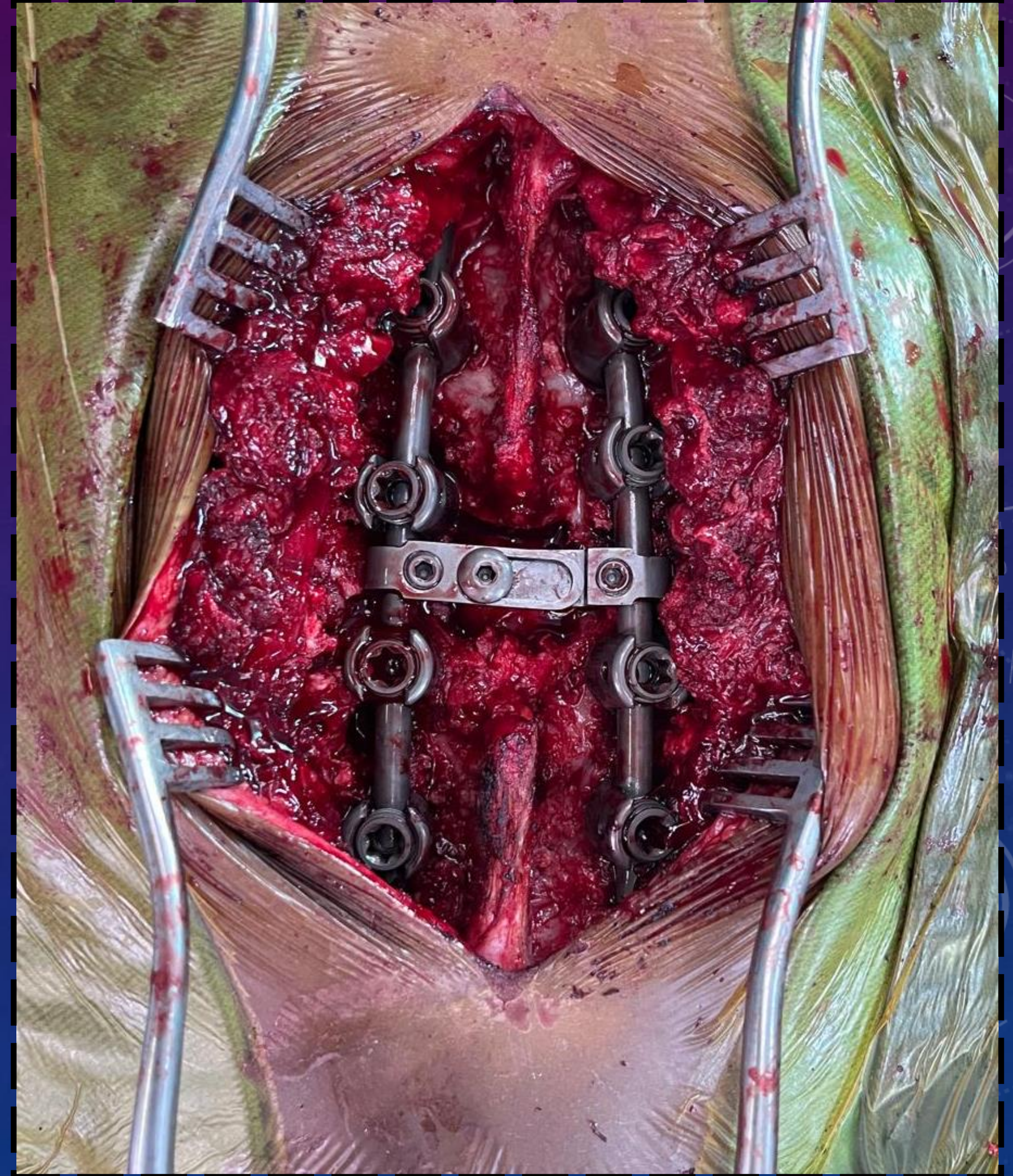




- Wound was thoroughly irrigated by N/S. After ensuring proper haemostasis , wound was closed in layers keeping a drain in situ. Skin was closed by stapler pins. Aseptic dressing applied.







Pod	Follow up	Treatment
Day of operation (28.01.24)	Patient's complaints: Pain in the operative area On examination; Pulse : 80bpm Bp: 100/70mmhg Temp : 98 Heart : 1st & 2nd heart sound audible Lungs : vesicular Abdomen : soft non tender Bowel : Not moved Bladder : Catheterized Bandage : Dry DTC: 50cc	NPO for 6 hours then liquid diet followed by normal • Inf. 5% DNS 1l + Inf 0.9% normal saline 500 ml • Inj Meropenem 1gm • Frusemide with 100ml n/s • Tab Ethambutol+ isoniazide + Pyrizinamide + Rifampicin 4 FDC • Tab Pyridoxin Hydrocloride 10mg • Cap Flucloxacilin 500mg • Inj Pethidine Hydracloride 50mg • Inj Ondansetron 1 amp • Inj ketorolac tromethamine 30mg • Inj Esomeprazole 40mg • Tab Vitamin C 250mg • Tab Clonazepem 0.5mg • Syp Atorvasttatin 2TSF • Supp Voltalin 1STick P/R

POD	Follow Up	Treatment
1st POD	Patient's complaints: Restlessness On examination; Pulse :100 bpm Bp : 120/80 mmg Hg Temp : 98 F Heart : 1st and 2nd Heart sound audible Lungs : Vesicular breath sounds Abdomen : soft and non tender Bowel : Not moved today Bladder : catheter in situ Bandage : Dry DTC : 66 cc	• Diet : Normal • Inj Meropenem 1g mixed with 100 ml Normal Saline slowly over 30 mins I/V 8 hourly • Inj Mecobalamine 1 amp I/M OD • Cap Flucloxacillin 500 mg A/M 1+1+1+1 • Tab Deflazacort 6 mg A/M 1+1+1 On going Rx......

Histopathology Report:

Specimen : Tissue from dorsal spine, D8 - D10

Microscopic Appearance : Sections show fibrocollagenous and granulation tissue. These have been infiltrated by many Chronic and a small number of acute inflammatory cells. Focal areas show a few ill defined epitheloid cell granulomas with early caseation necrosis. Also seen are a few specules of dead bone . No evidence of malignancy is seen.

Diagnosis : Features suggestive of tubercular osteomyelitis

Culture report :

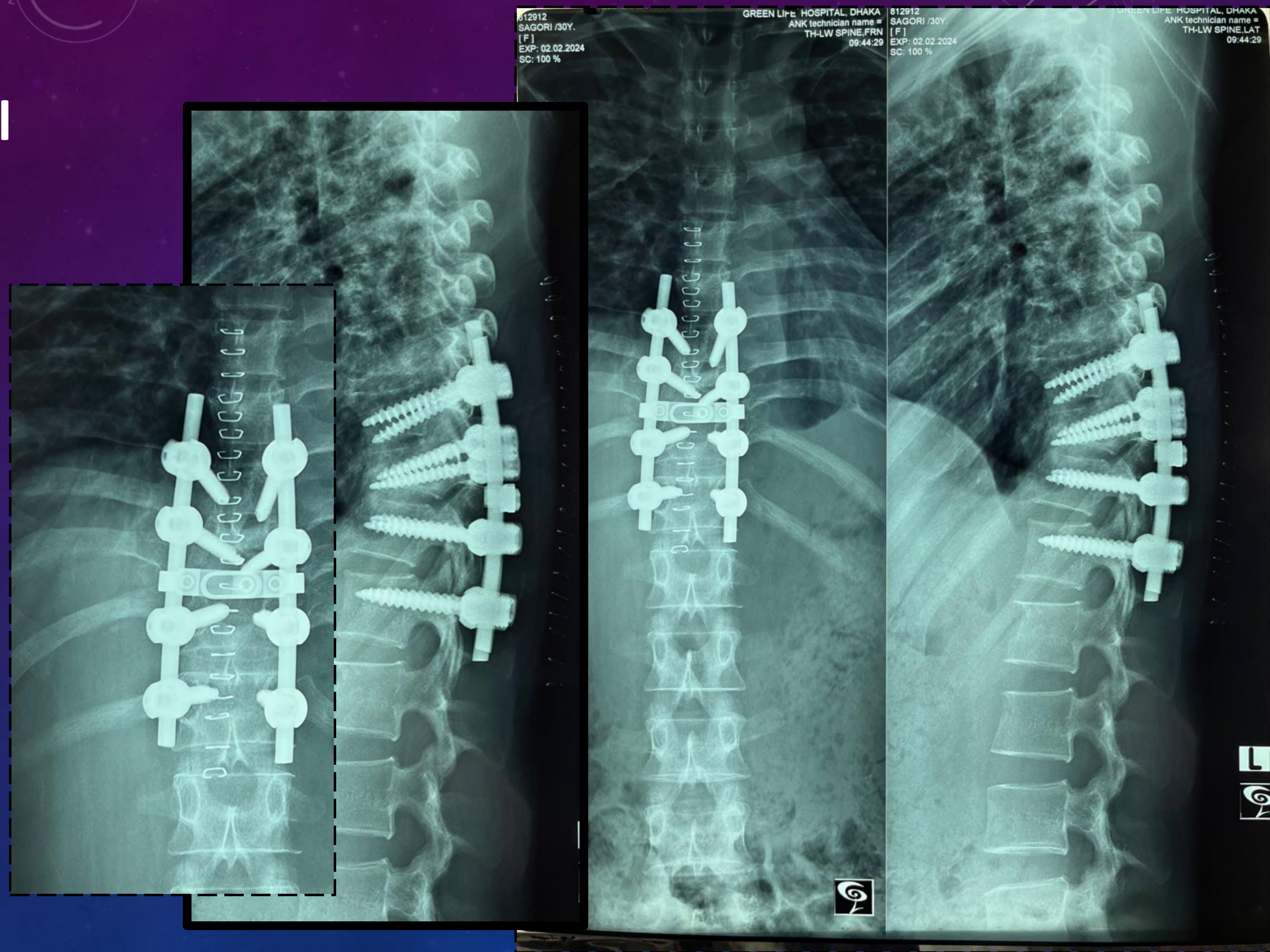
Tissue culture :

Incubated aerobically at 37℃ for 48 hours ,yielded no growth.

POD	Follow Up	Treatment
3rd to 4th POD	Patient's complaints: Restlessness On examination; Pulse :100 bpm Bp : 120/80 mmg Hg Temp : 98 F Heart : 1st and 2nd Heart sound audible Lungs : Vesicular breath sounds Abdomen : soft and non tender Bowel : Not moved today Bladder : catheter in situ Bandage : Dry DTC : 35 ml (Drain tube off on 4th POD)	• Diet : Normal • Inj Meropenem 1g mixed with 100 ml Normal Saline slowly over 30 mins I/V 8 hourly • Inj Mecobalamine 1 amp I/M OD • Cap Flucloxacillin 500 mg A/M 1+1+1+1 • Tab Deflazacort 6 mg A/M 1+1+1 Ongoing Rx ....

Post Operative Xray Spine A-P and Lateral view :

Stabilization of (D8-D9, D11-D12) vertebrae was done after removing all debris and retropulsed body of D10 vertebrae



POD	Follow Up	Treatment
5th to 7th POD	Patient's complaints: Restlessness On examination; Pulse :100 bpm Bp : 120/80 mmg Hg Temp : 98 F Heart : 1st and 2nd Heart sound audible Lungs : Vesicular breath sounds Abdomen : soft and non tender Bowel : Not moved today Bladder : catheter in situ Bandage : Dry	• Diet : Normal • Inj. Mecobalamine... 1amp.. I/M... OD • Cap. Flucloxacillin... 500mg... A/M... 1+0+1 • Tab. Deflazacort... 6mg... A/M... 1+1+1(for 7 days) ,then 1+0+1 (for 7 days), then 0+1+0 (for 7 days) On going rx..........

POD	Follow Up	Treatment
8th to 15th POD	Patient's complaints: Nausea, Vomiting On examination; Pulse: 100 bpm Bp : 100/60 mmHg Temp : 98 F Heart : 1st and 2nd Heart sound audible Lungs : Vesicular breath sounds Abdomen : soft and non tender Bowel : Not moved today Bladder : Voided Bandage : Dry (Catheter was removed on 9th POD)	• Diet : Normal • Tab. Mecobalamine... 0.5mg... 1+0+1 • Cap. Flucloxacillin.. 500mg... A/M... 1+1+1+1 • Tab. Deflazacort... 6mg... A/M... 1+0+1 (upto 12/02/24) then , 1+0+0 (upto 17/02/24) • Tab. Ceevit.. 250mg... 1+0+1 • Syp. Lactulose... 2 TSF... TDS • Supp. Diclofenac Sodium... 50mg... SOS • Tab. Neuro B... 0+1+0 On going rx..........

Treatment during discharge :

- Tab. Tab Ethambutol+ isoniazide + Pyrizinamide + Rifampicin 4 FDC B/M... (3+0+0).... upto 14/04/24
- Tab. Pyridoxin Hydrochloride... 20mg... (1+0+1)... Continue
- Tab. Mecobalamine... 0.5mg... (1+0+1)... upto 15/03/24
- Cap. Omeprazole... 20 mg... B/M... (1+1+1)... upto 03/03/24

Advice on Discharge :

- Complete bed rest
- Take medicine regularly
- Follow up after 1 month
- **Do the exercises as advised**
- Use Taylors brace

Any Questions?